

IV. *Notes on American and other Tingitidæ, with Descriptions of two new Genera and four Species.*
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[Read December 1st, 1897.]

PLATES II, III.

THE following notes were made while studying the numerous Central-American species of this family of Heteropterous insects (*cf.* Biol. Centr.-Am., Rhynchota, ii, pp. 1-48). Most of the corrections in the synonymy of various South-American species have already been noted by me, but as they may be overlooked in a work dealing with a limited fauna, they are here repeated. Professor Poulton having kindly lent me the small but valuable collection of American Tingitidæ belonging to the Oxford Museum—mostly from the Antillean island of St. Vincent, or from the Amazons (*Bates*),—some remarks on these are added, with descriptions of one new genus and three species. Herr A. Handlirsch, also, has sent me for examination a large number of American Tingitidæ belonging to the Vienna Museum: amongst these, there are specimens of an interesting new genus, from Lower California, allied to *Acalypta*, Westw., a description of this insect being included in the present paper. The opportunity is taken, too, of figuring a number of the types of Stål's South-American species, very many of which, including those of all his numerous American genera, have been communicated by Dr. Aurivillius of the Stockholm Museum. The two South-American species of *Monanthia* described by Mr. Distant (Ann. Soc. Ent. Belg. 1888, p. lxxxiii) are also figured.

PHYLLOTINGIS, Walker.

This genus (= *Alyattes*, Stål, 1865, and *Euloba*, Uhler, 1884), based upon a single species from the Amazons, *P. arida*, Walk. (= *eximia*, Hagl., and *pallidu*,

Uhler), is incorrectly referred to the Tingitidæ: it belongs to the Aradidæ. The name *Alyattes* being preoccupied, Dr. Bergroth [Verh. zool.-bot. Ges. Wien, xxxvi, p. 59 (1886)] has substituted *Phyllocraspedum* for it; Walker's name, published in 1873, must however be retained.* His species will stand as *Phyllotingis eximia*, Haglund's name having five years' priority. Two others are now known.

SOLENOTOMA, Signoret.

Colcopterodes, Philippi, Stett. ent. Zeit. xxv, p. 306 (1864).

This genus includes a single species, *S. liliputianum*, Sign. (= *Coleopterodes fuscescens*, Philippi), from Chili. There are two specimens of it in the Oxford Museum.

DOLICHOCYSTA, gen. n.

Rostrum extending to the meso-metasternal suture. Rostral groove uninterrupted, narrow and parallel on the pro- and mesosternum, closed in front, the buccal laminae long and very prominent. Intercostal portion of the metasternum broad and transverse. Antennae slender, widely separated at the base. Head without spines, the eyes small. Pronotum tricarinate, with broad, rounded, closely reticulated membranous margins, and a long decurved, anteriorly prominent hood, the triangular posterior portion largely developed, acute at the tip. Elytra short, broad oval, a little longer than the abdomen; discoidal area large, occupying more than two-thirds of the length of the elytra, raised externally, and surrounded by prominent nervures, the outer (median) nervure subfoliaceous; subcostal area about as wide as the costal; costal area of uniform width from the base to near the apex, biseriate almost to the tip. Orifice not visible. Legs very slender.

This genus bears a general resemblance to *Acalypta*, Westw. (= *Orthostira*, Fieb.); but differs from it in the very prominent buccal laminae, which close the rostral groove in front, the long, anteriorly prominent, decurved pronotal hood, &c. It is perhaps best placed near *Corythaica*, Stål. The specimens described may perhaps belong to a brachypterous form; they are from the northern part of Lower California.

* The antennae are incorrectly described by Walker, the type having a very elongate basal joint

I. *Dolichocysta venusta*, sp. n. (Pl. II., figs. 1; 1a, profile.)

Broad oval, short, dull; fuscous, the pronotum with the areolæ at the sides in front and behind, the areolæ of the hood in part, the tip of the posterior process, and the three carinæ, a broad blackish patch on the median one excepted, more or less whitish and subhyaline; the elytra greyish, with a spot on the discoidal area before the apex, a patch on the costal area before the middle, and some spots or some of the nervures before and beyond it, black, the other portions of the costal area whitish and subhyaline with pale nervures, the nervures on the rest of the elytra blackish or fuscous; the antennæ testaceous, with the outer half of the apical joint black; the legs testaceous, the femora black or piceous in the middle. Antennæ with joints 1 and 2 stouter than the others, 2 much shorter than 1, 3 very slender and elongate, 4 lanceolate and pilose, about as long as 1 and 2 united. Pronotum closely punctured on the disc; the membranous margins with 3—4 rows of small areolæ; the median carina strongly, the two outer carinæ feebly, foliaceous, the latter sinuous and connected anteriorly with a layer of membrane which fills the space outside the base of the hood; hood extending beyond the head, narrowed and strongly curved downwards in front, rather widely reticulated. Elytra a little wider than the pronotum; discoidal, subcostal, and sutural areas (the margin of the latter excepted) closely reticulated; costal area slightly re-curved, with larger areolæ, the two rows diminishing to one at the apex.

Length $2\frac{1}{3}$ — $2\frac{1}{2}$, breadth $1\frac{1}{3}$ — $1\frac{1}{4}$ millim.

Hab.—LOWER CALIFORNIA, Guadalupe (*Bilimek, in mus. Vind. Cæs.*).

Three examples, two of which are from Guadalupe, the other without definite locality. The insect is not included in Prof. Uhler's list of Hemiptera Heteroptera of Lower California [Proc. Calif. Acad. Sci. (2) iv, pp. 223-295 (1894)].

CORYTHUCHA, Stål.

Numerous closely allied American species belong to this genus. *Monanthia lucida*, Walk. (= *C. fuscigera*, Stål), and *Tingis spinosa*, A. Dugès, both from Mexico, also appertain here. Stål's type of *C. fuscomaculata*, from Brazil, is figured on Plate II, fig. 2. This last-mentioned insect is extremely like *C. fuscigera*, Stål, but it appears to have the apical margin of the elytra less rounded, the inner portion being oblique.

TINGIS, Fabr.

Stål (Enum. Hemipt. iii, p. 123) uses the name *Stephanitis* for the European *Tingis pyri*, Fabr., and *T. oberti*, Kol., and a very dissimilar South-American form, *S. mitrata*, Stål, but this course has not been followed by Lethierry and Severin. The American species ought to be separated, and the name *Stephanitis* could be retained for it. Stål's type is figured on Plate II, figs. 3, 3a.

It may be here noted that the insect figured in Cuvier's Règne Animal, Ins., Atlas, ii, pl. 91, figs. 5, 5a, b, under the name *Tingis cristata*, Panz., is evidently referable to *T. pyri*, Fabr. It has nothing to do with Panzer's species.

LEPTOBYRSA, Stål.

The type of this genus is *L. steini*, Stål, from Rio Janeiro. It is figured on Plate II, fig. 4. Two others have been described by Berg from Buenos Ayres and five by myself from Central America.

GARGAPHIA, Stål.

This genus seems to be well characterised by the prominent transverse sinuous ridge between the meso- and metasternum, the cordate intercoxal portion of the metasternum being surrounded at the sides and in the front by a continuous membranous ridge. The species are all American.* Stål's type of *G. trichoptera*, from Bogota, Colombia, is figured on Plate II, fig. 5.

CORYTHAICA, Stål.

Typonotus, Uhler, Proc. Zool. Soc. Lond. 1893, p. 716.

The characters of this genus were taken by Stål and Uhler from the same species, *C. monacha*, Stål (= *Tingis cyathicollis*, Costa, and *Typonotus planaris*, Uhler), the type of *C. monacha* being from Rio Janeiro and that of *T. planaris* from the Island of St. Vincent. Numerous specimens of the species are contained in the Oxford Museum. Stål's type has been communicated by Dr.

* *Tingis formosa*, Göldi, from Pará, probably belongs here or to *Leptostyla*, Stål.

Aurivillius. The insect has been beautifully figured by A. Costa. The second known species of the genus, *C. carinata*, Uhler, is from the Island of St. Vincent, and it has also been found in Guatemala by myself.

PACHYCYSTA, gen. n.

Rostrum reaching the first ventral suture. Rostral groove subparallel, uninterrupted, closed in front, the buccal laminae not prominent, the meso- and metasternal laminae slightly converging behind. Antennae pilose, distant at the base, with moderately long, slender joints, 1 and 2 stouter than 3, 1 a little longer than 2, (4 broken off) Head with five short decumbent spines, very short, obtuse antenniferous tubercles, and an oblong, smooth, convex prominence in front. Pronotum with a very large, oval, anteriorly truncate hood, three foliaceous carinae, and very broad, shell-like, incurved membranous margins. Elytra oval, rounded at the tip; discoidal and subcostal areas closely, the costal and sutural areas more widely, reticulated, the costal area very broad, with three or four rows of hyaline areolae, the discoidal area extending to the middle and surrounded by prominent nervures. Orifice visible. Nervures of the pronotal processes and elytra stout, thickly pilose.

The single species from which the above characters are taken is perhaps nearest allied to the monotypic genus *Megalocysta*, Champ.; but differs from it in having the pronotum strongly tricarinate, with the membranous margins greatly extended, vertical, and shell-like, and the reticulation of the elytra and of the membranous portions of the pronotum very much closer, &c. It cannot be included in *Leptostyla* or any of the other genera characterized by Stål.

Pachycysta diaphana, sp. n. (Pl. II, figs. 6, 6a.)

Body ferruginous, the integument testaceous, the areolae of the elytra and pronotal processes more or less hyaline, the nervures and the costal margin thickly clothed with very short pallid hairs; the legs and antennae ferruginous. Pronotum with the three carinae strongly foliaceous, each with a row of transverse hyaline areolae, the median carina angularly raised anteriorly, the outer carinae curved inwards and partly covered by the hood; the hood extending to about the middle, rather closely reticulated; the membranous shell-like margins rounded externally, with numerous small areolae; the triangular posterior portion large, and, like the disc, closely

reticulated. Elytra with the subcostal area biseriate; the broad costal area with three to four rows of rather small areolæ; the sutural area unequally reticulated. Wings extending to a little beyond the abdomen.

Length $3\frac{2}{3}$, breadth nearly 2 millim. (♀.)

Hab. AMAZONS (*Bates, in Mus. Oxon.*).

One example.

LEPTOSTYLA, Stål.

Four American species were referred to this genus by Stål; one other has since been added by Berg, and seventeen by myself; *Monanthia lincifera*, Walk., from Brazil, also belongs to it.* It is one of the most characteristic genera of the family in Central America. Stål's type of *L. furcata*, from Rio Janeiro, is figured on Plate II, figs. 7, 7a.

LEPTOPHARSA, Stål.

This genus will probably prove to be inseparable from *Leptostyla*. Two species were known to Stål and a third has been added by myself, all from Tropical America. Stål's type of *L. elegantula*, from Colombia, is figured on Plate II, fig. 8.

LEPTODICTYA, Stål.

Five Tropical-American species were included by Stål under *Leptodictya*, and two others have been added by myself. *Monanthia tabida*, H.-S., from Mexico, also belongs here. Stål's type of *L. fuscocincta*, from Rio Janeiro, is figured on Plate II, fig. 9.

ACANTHOCHILA, Stål.

The type of this genus is *A. armigera*, Stål (= *spinuligera*, Stål), from Rio Janeiro, this species being now known to extend northwards to Southern Mexico. Two others have since been added by Buchanan White and Uhler respectively. *A. armigera* has been figured by me elsewhere.

* The type of an allied species, *M. lanceolata*, Walk., from Brazil, is apparently lost, as it cannot now be found in the British Museum.

LEPTOCYSTA, Stål.

Stål's single species, *L. scænebulosa*, from Rio Janeiro, is figured on Plate II, figs. 10, 10a.

SPHEROCYSTA, Stål.

Of the two Brazilian species included in this genus, one, *S. globifera*, Stål, is figured on Plate II, figs. 11, 11a.

AMBLYSTIRA, Stål.

Stål included in this genus a single species, *A. pallipes*, from Rio Janeiro, and four others have been added by myself. The type of *A. pallipes* is figured on Plate II, fig. 12.

LEPTOYPHA, Stål.

The type of this genus is *Tingis mutica*, Say, from Texas. Two allied forms from Mexico and Guatemala have been figured and described by me elsewhere.

TIGAVA, Stål.

This genus was based upon a single species, *T. præcellens*, Stål, from Rio Janeiro; two others have been added by me from Central America. Stål's type is figured on Plate III, fig. 1.

TELEONEMIA, Costa.

Tingis, subgen. *Americia*, Stål, Enum. Hemipt. iii, p. 131.

Lasiacantha, Lethierry et Severin, Cat. Hémipt. Hétéropt. iii, p. 18 (part.).

This appears to be the most characteristic genus of Tingitidæ in Tropical America, fourteen being known to me from Central America alone.

The types of Stål's species of *Teleonemia* have been communicated by Dr. Aurivillius, also those of *Tingis* (*Americia*) *albilatera* and *T. (Americia) limbata*. *T. albilatera*, as I have noted elsewhere, = *Tingis triangularis*, Blanch., Stål apparently not having seen Blanchard's figure. The types of the following species are figured on Plate III: *T. (Amauro-*

sterphus) *morio*, fig. 2; *T. validicornis*, fig. 4; *T. luctuosa*, fig. 5; *T. proluxa* (?=*elevata*, Fabr.), fig. 6; *T. belfragii*, fig. 8; also that of *T. (Americia) limbata*, fig. 10. A figure of *T. aterrima* is given, fig. 3, from a specimen from the Amazons in the Oxford Museum, Stål's type having the apical joint of the antennæ broken off.

Of *T. sacchari*, H.-S. and Stål, there are numerous specimens from the Island of St. Vincent in the Oxford Museum.

The two following species from the Amazons cannot be identified with any of the known members of the genus, and they are therefore treated as new.

Teleonemia longicornis, sp. n. (Pl. III, fig. 7.)

Elongate, narrow, dull; fusco-ferruginous, the spines on the head, and the margins, carinæ and hood of the pronotum testaceous, the triangular posterior portion of the latter yellowish; the elytra fuscous, with the base, the outer and inner margins of the sutural area, the costal margin, and the nervures of the costal area from a little beyond the middle to near the apex, testaceous, the areolæ of the latter for a similar distance, and also some of those along the apical margin, and two of the inner ones before the tip, hyaline; the antennæ ferruginous, the two basal joints and the apex of the third darker, the fourth joint black; the legs ferruginous. Head with decumbent spines; antennæ very elongate, about as long as the elytra, moderately stout, joint 2 slightly shorter than 1, 3 three times as long as 4, 4 pilose. Pronotum sharply tricarinate, and with a small, compressed, angularly projecting hood in front, the marginal carinæ moderately prominent, the interspaces coarsely, closely punctate. Elytra long, constricted beyond the middle, and slightly dilated at the apex, the apices bluntly rounded, the median nervure prominent; discoidal area with rather deeply impressed areolæ; subcostal area biseriate; costal area with a single row of transverse areolæ from about the middle onwards, becoming vertical and cariniform towards the base. Rostrum reaching the meso-metasternal suture.

Length 5, breadth $1\frac{1}{2}$ millim. (♂.)

Hab. AMAZONS (*Bates, in Mus. Oxon.*).

One example. This insect resembles Costa's figure of *T. funerea*, but has shorter, less parallel, and differently coloured elytra, the small pronotal hood more prominent in front, &c. Amongst the numerous species described by

Stål (the types of all of which are before me) it is perhaps nearest allied to *T. scrupulosa*, from which it may be separated by the very long and less distinctly pilose antennæ, the longer elytra, with glabrous discoidal area and the hyaline areolæ of the costal area not extending to the base, &c.

Teleonemia brevipennis, sp. n. (Pl. III, fig. 9.)

Moderately elongate, narrow, dull; blackish-fuscons, the spines on the head and the front of the pronotum obscure testaceous, the triangular posterior portion of the pronotum, and the hood in part, yellowish; the elytra fuscons, with the costal margin and the nervures of the costal area for some distance beyond the middle testaceous, the areolæ of the latter to near the apex hyaline. Head with decumbent spines; antennæ long and moderately stout, joint 2 considerably shorter than, and not so stout as, 1, 3 rather more than twice the length of 4, 3 and 4 clothed with very short hairs. Pronotum sharply tricarinate, and with a small, compressed, subangularly projecting hood in front, the marginal carinæ prominent, the interspaces coarsely, closely punctate. Elytra (when closed) suboval, comparatively short, rounded at the apex; discoidal area with deeply impressed areolæ, the nervure limiting it externally rounded and prominent; subcostal area biseriate; costal area rapidly widening beyond the middle, very narrow towards the base, with a single row of areolæ, increasing to two in the widest part, the areolæ small to about the middle and then becoming larger and transverse. Rostrum reaching the meso-metasternal suture.

Length $3\frac{3}{4}$, breadth $1\frac{1}{2}$ millim. (♀.)

Hab. AMAZONS (*Bates, in Mus. Oxon.*).

This species differs from all the *Teleonemiæ* known to me in the relatively short, somewhat oval elytra. The costal area is abruptly widened beyond the middle, and at the widest part there are two additional hyaline areolæ, there being thus two rows at this place. The wings extend beyond the abdomen. The insect approaches the *Tingis* (*Americia*) *limbata*, of Stål, which would be better placed in *Teleonemia*.

EURYPHARSA, Stål.

The type of this genus is *Tingis nobilis*, Guér., from, Tropical South America, and *T. circumdata*, Blanch.,

belongs to the same species. There are two specimens of it in the Oxford Museum: one labelled "S. Amer., d'Orbigny, ex Mus. Jard. Plantes," this being, no doubt, one of Blanchard's types, which were from Chiquitos, Bolivia; and the other from the Amazons (*Bates*). A second species has been described by me from the State of Panama. Both have been figured.

MONANTHIA, Lep.

The four Tropical-American representatives of this genus known to me—*M. monotropidia*, Stål, *M. parmata*, Dist., and *M. loricata*, Dist., and a new species described by me elsewhere—are closely allied.

Figures of Mr. Distant's species are here given on Plate III: fig. 11 being taken from *M. loricata*, and fig. 12 from *M. parmata*.

EXPLANATION OF PLATES II AND III.

[See *Explanation facing the PLATES.*]